

CLAIMS

What is claimed is:

Sub A
1 A method of providing information to a user through a control device, the
2 method comprising:
3 receiving an event signal indicating an occurrence of an event; and
4 responsive to receiving the event signal, generating a notification signal within the
5 control device to notify the user that the event has occurred.

1 2. The method of claim 1, wherein generating the notification signal comprises:
2 providing the user with a visual indication on the control device that the event has
3 occurred.

1 3. The method of claim 2 wherein the visual indication comprises illuminating a
2 light source on the control device.

1 4. The method of claim 3 wherein the light source blinks to indicate that the
2 event is urgent.

1 5. The method of claim 1, wherein generating the notification signal comprises:
2 providing the user with an audio indication on the control device that the event has
3 occurred.

1 6. The method of claim 1, wherein generating the notification signal comprises:
2 providing the user with a vibratory indication on the control device that the event has
3 occurred.

1 7. The method of claim 1, wherein generating the notification signal comprises:

2 providing the user with a tactile indication on the control device that the event has
3 occurred.

1 8. A method for notifying a computer user of occurrence of an event, the method
2 comprising:

3 communicating from a host computer to a control device that the event has occurred,
4 the control device having a region on its surface for an alterable texture; and
5 responsive to the communication from the host computer, altering the texture on the
6 region on the surface of the control device to notify the user that the event has
7 occurred.

1 9. The method of claim 8, wherein altering the texture comprises:
2 raising a plurality of pegs through a plurality of apertures in a surface of the control
3 device.

1 10. The method of claim 9, wherein raising the plurality of pegs comprises:
2 rotating an actuator to push a lever which is communicatively coupled to the plurality
3 of pegs.

1 11. The method of claim 10, wherein the actuator is of electromagnetic type.

1 12. The method of claim 11, wherein the electromagnetic actuator is bi-stable.

1 13. The method of claim 10, wherein the actuator is a solenoid.

1 14. The method of claim 9, wherein the plurality of pegs is in a grid shape.

1 15. The method of claim 9, wherein the plurality of pegs is in a quincunx shape.

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1 16 The method of claim 8, wherein the control device is a mouse.

1 17. A method for notifying a computer user of occurrence of an event, the method
2 comprising:

3 communicating from a host computer to a mouse that the event has occurred, the
4 mouse having a region on its surface for an alterable texture; and

5 responsive to the communication from the host computer, altering the texture on the
6 region on the surface of the mouse to notify the user that the event has
7 occurred, wherein altering the texture comprises raising a plurality of pegs
8 through a plurality of apertures in the region on the mouse.

1 18. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 a plurality of pegs in the region on the control device for changing the texture of the
5 control device; and

6 an actuator module for controlling the plurality of pegs.

1 19. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 a key plate on the region of the control device; and

5 a pegs plate comprising a plurality of pegs, a portion of which can protrude through
6 the key plate to change the texture of the region on the control device

1 20. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 a key plate on the region on the control device;

5 a pegs plate comprising a plurality of pegs, a portion of which can protrude through
6 the key plate to change the texture of the region on the control device;
7 a lever communicatively coupled to the pegs plate to reposition the pegs plate with
8 respect to the key plate;
9 a cam communicatively coupled to the lever for manipulating the lever; and
10 an actuator module communicatively coupled to the cam for rotating the cam.

1 21. The system of claim 20 wherein the actuator module is bi-stable.

1 22. The system of claim 20 wherein the actuator module comprises a solenoid.

1 23. The system of claim 20 wherein the lever is flexible.

1 24. The system of claim 20 wherein the pegs plate comprises a plurality of pegs in
2 a grid shape.

1 25. The system of claim 20 wherein the pegs plate comprises a plurality of pegs in
2 a quincunx configuration.

1 26. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

4 protruding means in the region on the control device for changing the texture of the
5 control device; and
6 actuator means for controlling the protruding means.

1 27. A system for notifying a computer user of an occurrence of an event by
2 changing the texture of a region on the control device being used by the user, the system
3 comprising:

alterable means on the region of the control device for altering the texture of the region on the control device; and
protruding means for protruding through the alterable means on the region of the control device.

28. A computer program product for storing a program for permitting a computer to perform a method of providing information to a user through a control device, the method comprising:
receiving an event signal indicating an occurrence of an event; and
responsive to receiving the event signal, generating a notification signal within the control device to notify the user that the event has occurred.

29. A computer program product for storing a program for permitting a computer to perform a method for notifying a computer user of occurrence of an event, the method comprising:
communicating from a host computer to a control device that the event has occurred, the control device having a region on its surface for an alterable texture; and
responsive to the communication from the host computer, altering the texture on the region on the surface of the control device to notify the user that the event has occurred.

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